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Spill Prevention, Control and Countermeasure Report

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**Report to the Joint Standing Committee on
Environment and Natural Resources
126th Legislature, First Session**

**Spill Prevention, Control and Countermeasure
Report**

January 2014

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Executive Summary

38 MRSA § 570-K requires the Maine Department of Environmental Protection (Department) to submit a report to Legislature every two years by January 15th. This report is being submitted to satisfy the 2014 biennial reporting requirement. Included within this report are the specific data for each activity within the Spill Prevention, Control and Countermeasures (SPCC) Program for 2012 and 2013.

The Department provides technical assistance to owners and operators of aboveground oil storage facilities subject to federal requirements for SPCC, and ensures compliance with Maine law requiring annual inspections and leak detection for underground oil piping at aboveground oil storage (AST) facilities. The federal regulations require SPCC plans for AST facilities having a total aboveground oil storage capacity exceeding 1,320 gallons and that could potentially discharge to “navigable” waters. Although the primary purpose of federal SPCC regulations is to address threats to surface water, rather than groundwater, properly written and executed SPCC plans also protect groundwater by reducing the number and extent of oil spills at AST facilities in Maine.

In comparison to the previous biennial reporting period of 2010-2011, the Department conducted more technical assistance visits, and found a higher rate of compliance. The Department also found a significant increase in the number of inspected facilities that operate leak detection for their underground piping.

I. Introduction

Federal regulations under 40 CFR Part 112 require Spill Prevention, Control and Countermeasure (SPCC) plans for aboveground oil storage facilities having a total aboveground storage capacity exceeding 1,320 gallons. These rules were first promulgated in the 1970's under the Clean Water Act by the U.S. Environmental Protection Agency (EPA) and were most recently revised in November of 2009. The primary focus of the federal regulations is the protection of surface waters.

The Maine Legislature enacted 38 MRSA § 570-K(5) in March 2002, giving the Department authority to enforce the federal SPCC requirements for retail, marketing, and distribution facilities in Maine. The Maine SPCC program is more limited in scope than EPA's and only has jurisdiction over facilities such as service stations, bulk plants (i.e. facilities where oil is stored in bulk prior to distribution), marinas, and airports. The state law does not apply to private AST facilities such as motor fleets, home heating oil tanks, or other tanks used to store oil for consumption on the premises. However, private non-retail/marketing facilities are still subject to the federal SPCC regulations if they trigger the 1,320 gallon threshold of aboveground oil storage capacity, and the Department will provide technical assistance to these facilities upon request from the facility owner or operator.

The statute, as amended in 2005, requires the Department to report to the Legislature by January 15, 2006, and on that date every 2 years thereafter, on all activities undertaken by the Department under the provisions of section 38 MRSA § 570-K(5). This report is being submitted to satisfy the 2014 reporting requirement.

II. Program Goals

The goals of Maine's SPCC Program are to:

- Protect human health and the environment from the risks associated with oil spills;
- Reduce oil spill clean-up costs; and
- Protect ground water, surface water and other resources from oil spills at aboveground storage tank (AST) facilities by improving spill prevention and control.

III. Summary of Primary Tasks for SPCC Program, 2012 – 2013

1. *Administers laws and rules regarding underground piping at AST facilities and siting of new ASTs in Wellhead Protection areas.*

In addition to administering Maine's SPCC Program, program staff also administers the law pertaining to underground product piping associated with aboveground motor fuel tanks established in 2006 as well as provide technical support to the Bureau's administration of the Wellhead Protection Laws, established in 2008, regarding the installation of new aboveground tanks.

In August of 2006, P.L. 2005, ch. 491 was enacted establishing new piping installation requirements for certain AST facilities. These requirements apply to any tanks at a facility where

the tank is installed above ground, the tank stores motor fuel (gasoline, diesel, biodiesel, aviation gasoline, jet fuel, gasohol, or other fuels used in the operation of a vehicle or motor engine), and the tank is connected to underground fuel piping.

Underground piping installed prior to June 24, 1991 was not required to have leak detection. The 2006 law brought motor fuel underground piping associated with ASTs up to the same standards applied to piping associated with underground oil storage tanks (USTs).

All ASTs that store motor fuel and are connected to underground piping are now required to be both registered with the Department and submit a passing annual inspection report from a Maine Certified Tank Installer/Inspector. In addition, all underground piping associated with ASTs that store motor fuel regardless of the installation date are required to meet the Department's leak detection standards consisting of secondary containment with continuous electronic monitoring.

Subsequent to the changes in law in 2006, P.L. 2007, ch. 569 was enacted to protect existing public and private water supplies, as well as future water supplies (i.e. sand and gravel aquifers), from the threats of spills and leaks from aboveground oil storage tanks, as well as other types of businesses that have historically posed a significant risk to drinking water.

Maine law (38 M.R.S.A §§ 1391-1399) prohibits the installation of new AST facilities, such as motor fuel storage facilities and bulk fuel plants, in areas where an installation is likely to pose a threat to drinking water. The specific prohibitions are:

- No new ASTs within the source water protection area of a public drinking water well, or within 1000 feet of the public water well (whichever is greater); and
- No new ASTs within 300 feet of a private well (except for a private water supply well located on the same property as a facility and serving only that facility).

Heating oil tanks for use on the premises are exempt.

The statute also authorized the Department to promulgate regulations restricting the location of new AST facilities on significant sand and gravel aquifers mapped by the Maine Geologic Survey in a manner similar to existing restrictions on new UST facilities. No new AST facilities may be installed over a significant sand and gravel aquifer.

AST and UST facilities are subject to the same siting restrictions regarding proximity to public and/or private drinking water wells and significant sand and gravel aquifers.

2. Mailings to owners/operators and interested parties regarding AST regulation.

In March 2002 AST motor fuel facilities owners with underground piping were notified, via a mailing, that their annual inspection was past due and that their underground piping must be inspected annually, and that a passing annual inspection report must be submitted to the Department.

In January 2013 AST motor fuel facilities owners with underground piping were notified, via a mailing, that their annual inspection is past due and that their underground piping must be inspected annually, and that a passing annual inspection report must be submitted to the Department.

3. Conduct presentations for facility owners/tank installers/inspectors, consultants, and interested parties.

In April of 2012, SPCC program staff presented information at the Shaw Brothers Construction Company's annual safety training in Gorham, regarding SPCC Rules and AST Best Management Practices.

In March of 2013, SPCC program staff presented information at the Maine Marine Trade Association training seminar in Rockland, regarding Oil Spill Prevention at Marinas and Boat Yards.

4. Create and update forms and documents pertaining to AST regulations.

October 2012: Updated Maine Oil SPCC Guidance Document for conformance with the Quality Management System Requirements, QMS/R-1 (2011) Control of Documents and Records.

October 2012: Updated Model Oil SPCC Plan for Retail Facilities for conformance with the Quality Management System Requirements, QMS/R-1 (2011) Control of Documents and Records.

October 2012: Updated Model Oil SPCC Plan for Bulk Plants for conformance with the Quality Management System Requirements, QMS/R-1 (2011) Control of Documents and Records.

December 2012: Updated SPCC Professional Engineer List for conformance with the Quality Management System Requirements, QMS/R-1 (2011) Control of Documents and Records.

5. Merge State Fire Marshal AST data into the DEP's tank database.

The State Fire Marshal's Office (SFMO) collects one-time data from AST facilities when they initially permit their tanks.

New permits issued by the SFMO for ASTs are entered into the tanks database and assigned a Department facility registration number. In 2012 and 2013, 92 AST facilities permitted by the SFMO were entered into the tanks database.

Department SPCC program staff continues to meet monthly with staff from the SFMO and staff overseeing the Department tanks database to discuss issues and problems with the database.

6. *Review State Fire Marshal AST Permit applications for compliance with Department siting restriction law.*

The SFMO forwards AST permit applications to the SPCC staff person for review for compliance with the AST siting restriction requirements concurrent with SFMO's construction permit review.

From 2012 to 2013, SPCC staff has reviewed 109 State Fire Marshal Permit applications for compliance with the AST siting restriction requirements. Of these 109 applications, 4 applications were denied by the SFMO due to the proposed facility's proximity to public drinking water wells, private drinking water wells, or significant sand and gravel aquifers without the required variance from the Department. One of the four facilities was able to relocate their proposed oil storage facility outside the mapped sand and gravel aquifer. One facility is pursuing a variance. The other two facilities did not seek a variance and did not construct their proposed facilities.

7. *Provide and update educational materials for the regulated AST facilities.*

An SPCC guidance document and model SPCC plans were developed by early 2003 with the assistance of Jacques-Whitford, a consulting firm. The guidance document summarizes the SPCC regulations and other requirements pertaining to AST facilities. These documents have been maintained and updated by the Department staff following the amendments to the federal SPCC rule and other related rule changes. The Department also maintains an SPCC web page devoted to oil AST facilities. The web site is periodically updated to include new requirements and updated lists and forms pertaining to AST facilities. The web page is located at:

<http://www.maine.gov/dep/waste/spcc/index.html>

8. *Conduct technical assistance site visits to individual facilities.*

Program staff visited individual facilities in 2012 and 2013 to provide site-specific recommendations for spill prevention and control, and to facilitate SPCC planning, as well as underground piping registration, inspection requirements, and facility upgrades where needed. 71 site visits were conducted in 2012 and 2013. Just over half of the facilities visited in 2012-13 had an SPCC plan, an improvement over the previous two year reporting period. The most commonly observed problem was lack of, or inadequate, overfill protection measures for tanks. The second most commonly observed problem was inadequate secondary containment for tanks.

Of the 71 facilities inspected, 14 (20%) had underground product piping. All of these facilities met Maine's current standards for noncorrosive piping. Of the 14 facilities with underground piping, 2 (14%) facilities did not meet Maine's current standard for piping leak detection under Department Rule Chapter 691, and were required to upgrade their piping systems. The remaining 86% of the facilities with underground piping met the requirements for noncorrosive piping and leak detection. This is a significant increase from the same measures in 2010-2011 when 68% of inspected facilities did not meet the standard for piping leak detection. Summary data from the 2012 and 2013 SPCC field season are presented under Section IV below.

9. Requests for information

SPCC program staff respond to telephone and e-mail requests on a daily basis from other agency staff, facility owners/managers, certified tank installers, consultants, and the general public seeking information pertaining to AST facilities, such as siting of facilities, spill prevention/control, as well as other topics such as home heating oil tanks, and hazardous waste.

IV. 2012 - 2013 SPCC Technical Assistance Site Visits

Summary Statistics for Technical Assistance Program, 2012 and 2013:

Total number of technical assistance site visits conducted during 2012 and 2013: 71

Retail Service Stations - 13

Bulk Plants - 8

Bulk Plant & Retail Service Station Combined - 2

Marinas - 7

Airports – 6

Motor Fleet – 23

Heating – 5

Generator – 1

Lube Oil - 1

Waste Oil - 5

Note: Not all of these facilities are subject to Maine's State SPCC regulations because some facilities were found to be below the 1,320 gallon oil storage threshold or are used for on-site consumption.

AST Facilities Inspected in 2012 and 2013:

Number of facilities having SPCC plans (percentage of all facilities visited in 2012 and 2013):

- Number of inspected facilities determined not to be regulated under the SPCC rule: 5 (17%)

Of the remaining 66 facilities:

- Number of facilities required to have an SPCC plan that had a certified plan: 34 (52%)
- Number of facilities required to have an SPCC plan that did not have a plan: 32 (48%)

Type of tank secondary containment used by facilities – number of facilities (percentage of all facilities visited in 2012 and 2013):

- Containment dikes: 39 (55%)
- Double-walled tanks: 23 (33%)
- No or inadequate secondary containment for tanks: 8 (11%)
- Underground containment vault: 1 (1%)

Most commonly seen problems - number of facilities visited in 2012 and 2013:

- No or inadequate overfill protection: 27 (38% of all facilities visited)

- No or inadequate secondary containment for tanks: 8 (11% of all facilities visited)
- No or inadequate containment for loading rack at bulk plants: 2 (20% of bulk plants visited)

AST Facilities with underground piping – number of facilities visited in 2012 and 2013:

- Total number of facilities with underground piping: 14
- Facilities having underground unprotected steel piping: 0
- Facilities with non-corrosive piping systems but no leak detection: 2
- Facilities with double-walled piping systems and continuous leak detection systems but the leak detection system was not functioning/not maintained/the alarm was ignored: 1
- Facilities with double-walled piping systems and continuous leak detection systems that appeared to be functioning and being maintained properly: 11

Proximity to Sensitive Resources – number of all facilities visited in 2012 and 2013:

- Number of facilities located over a Significant Sand and Gravel Aquifer: 9 (13%)
- Number of facilities within 1000 feet of a public water supply: 7 (10%)
- Number of facilities within a Source Water Protection Area for a public community drinking water supply: 0 (0%)
- Number of facilities within 300 feet of a private water supply: 9 (13%)
- Number of facilities within 300 feet of surface water: 20 (28%)
- Number of facilities not in proximity to a sensitive resource: 26 (37%)

Facilities Referred to Enforcement Staff in 2012 and 2013

There are currently 162 AST motor fuel facilities with associated underground product piping systems registered with the Department. These underground piping systems must be installed, maintained, inspected, and removed under the same rules as underground piping associated with underground tanks.

In January of 2012, four improperly out of service facilities were referred to enforcement staff for failure to properly remove their abandoned facilities. All four facilities have since properly removed their underground piping facilities.

In May of 2013, six facilities were referred to enforcement staff for failure to comply with the annual inspection requirement. Five of the six facilities have submitted passing annual inspection reports to the Department and are currently in compliance with the annual inspection law.

Requests for SPCC Technical Assistance Visits in 2012 and 2013

Of the 71 SPCC site visits conducted in 2012 and 2013, 14 inspections were at the request of the individual facility owners and another 16 inspections were at the request of the Department's Stormwater Program for joint Stormwater and SPCC inspections.

Although the Maine SPCC program has jurisdiction over, and focuses on retail and marketing, and distribution facilities, SPCC staff has received requests from both retail and non-retail facilities for assistance with their SPCC issues. In 2012 and 2013, the Department responded to requests for technical assistance visits from 14 owners of facilities where the tank use included: retail, fleet fueling, waste oil and onsite heating fuel. In addition, the Department's Stormwater Program

requested joint inspections at 16 facilities where the tank use included: fleet fueling, waste oil, and heating fuel.

V. Communication & Coordination with the U.S. EPA

SPCC program staff contacts staff at the U.S. EPA New England Regional Office in Boston for guidance as required on interpreting the requirements of the federal SPCC regulation.

EPA staff has referred AST facility owners in Maine to Department staff for technical assistance regarding SPCC implementation, tank testing, and State of Maine requirements. In addition, Department Staff has accompanied EPA staff on eleven joint SPCC inspections in 2012 and 2013. These eleven joint inspections are included in the total of 71 inspections.

EPA staff consistently informs Maine SPCC staff regarding upcoming EPA inspections and copies Maine staff on all follow-up correspondence.

VI. Conclusion

Legislation enacted in Maine in 2002 (Title 38 Section 570(K)) authorizes the Department to enforce compliance with federal SPCC regulations for AST facilities that market or distribute oil to others. The law also requires the Department to provide educational and technical materials for use by regulated facilities.

Since the inception of Maine's SPCC program, the overall program goal has been to educate AST facility owners and operators regarding compliance with state and federal rules through an increased effort in technical assistance and outreach, rather than enforcement.

Because AST facilities have historically not been regulated as rigorously as UST facilities, the objective of the program is to continue to educate AST facility owners and operators regarding changing regulatory requirements, and spill prevention techniques and technologies. The Department has found an increased rate of compliance in 2012-2013, and a significant increase in the number of inspected facilities that operate leak detection for their underground piping. This improved facility management and equipment will further reduce the risk of discharges at AST facilities and their subsequent impact on the environment and public health.